ABSTRACT OF THE DISCLOSURE

To reduce a processing delay when re-encoding compressed moving pictures, and provide a compressed moving picture re-encoding apparatus with higher picture quality. Complexity measure computing unit computes respective complexity measures in two or more kinds of prescribed predetermined periods or numbers of pictures, using either or both of a quantizer step size and a number of bits of an input compressed moving picture stream. Also, picture group quantizer step size computing unit outputs a particular complexity measure from a plurality of complexity measures, and quantizer step size adjusting unit computes the quantizer step size using a pre-set average bit rate and the output complexity measure. Moreover, a quantizer step size selector that adjusts the quantizer step size every particular period according to a difference (excess or deficiency) between a target number of bits and an actual number of bits, computes the quantizer step size that is used in re-encoding, and performs rate control by taking the quantizer step size and the quantizer step size in the input compressed moving picture stream as input, and outputting the quantizer step size that is used in actual re-encoding. In this way, re-encoding is performed with a variable bit rate, and a compressed moving picture stream whose bit rate has been changed is output.